

seven feet through a light sandy soil, a very thin layer of a dark-colored earth, very moist, was reached, which was what was left of the coffin and flesh and bones. No structural remnants were to be seen in this. None of the bones were to be found except some of the cranial bones, separated at their sutures, a few teeth, and considerable brown hair covering the parietal bones. The frontal bone was fairly perfect, showing clearly the orbits. Both parietal bones were found, nearly whole, and covered thickly with brittle brown hair. Parts of the upper jaw, with sound, excellent teeth still imbedded in them, still existed. The sternal end of one clavicle and the bodies of a few of the upper vertebræ, with one lamina of a dorsal vertebra, were the only remaining bones. All the bones were wet and heavy — much moister than the adjoining soil. The only traces of the coffin were two small pieces of wood, preserved by the nails that had passed through them, and rust-stained. On breaking one of them in two, the substance of the nail was seen to have disappeared, but its form was indicated by a long square tube of iron-rust. This cavity was filled with a watery fluid. The long persistence of the hair, showing apparently nearly its original color, seemed strange when nearly all the solid parts of the skeleton were gone.

The adjoining grave contained the remains of the husband, who died in 1759, aged forty-eight years, and was fully eight feet deep. This skeleton was in a far better state of preservation than the wife's. The femora, humeri, one tibia, the atlas and the entire skull (part of the face having been broken while digging it up), were found. The long bones being very heavy and almost dripping with moisture, though the soil was very dry. In both cases it was easy to see where the grave-diggers one hundred and fifty years ago had disturbed the earth; and the contrast between the earth that had been dug up and that adjoining it was marked.

Another grave that was of interest contained the body of a man aged one hundred and one, who died in 1866, and of his wife aged eighty-nine, who died some fourteen years before. His was one of the most recent burials, and the box and the enclosed coffin, though rotten, retained their shape fairly well. When it was opened the lower extremities could be seen their whole length, the trunk and head being covered with earth. The tarsal and metatarsal bones were well preserved and also the phalanges of the toes. The head was well covered with hair on the back, and a few scattered hairs were seen opposite the middle of the forehead in front, as is so often seen on bald heads. There was a heavy beard still adhering to the chin, and a black neckcloth with a tie in front in good preservation. There was no evidence of so great age in the joints, whose surfaces were smooth and normal. The neck of the thigh-bone left the shaft at a less acute angle than is seen in bones of younger persons, but the difference was not so marked as is often seen. The jaws of the wife were toothless, the lower jaw consequently very shallow. There was in front a very sharp-edged ridge inclining backward towards the mouth; and the ramus left the body at a very oblique angle; its end would hardly rise more than three-fourths of an inch from the horizontal if the jaw were laid on a table.

The roots of plants — there are now very few trees in the cemetery — were in most cases closely intertwined among the bones, holding them snugly together and resisting their being lifted, even in the deepest

THE CONDITION OF BODIES LONG BURIED.

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The old cemetery in Waterbury, Conn., containing bodies buried from 1709 to 1867, having fallen into great neglect, and being situated near the centre of the city, was finally, by a vote of the authorities, made the site for a public library building. Disinterment of many of those who were buried there was begun on April 27, 1891. As opportunity rarely occurs on so large a scale for observing the condition of bodies buried so many years, I will state that of those I saw disinterred.

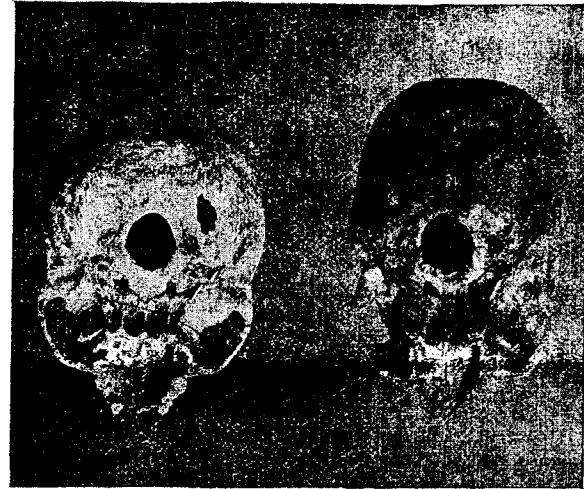
The first was that of a lady, thirty-eight years of age, who was buried in 1741. After digging some

graves. The skulls were in the older graves far better preserved than the rest of the bones, sometimes being about the only parts left. Teeth were found nearly perfect, and many of the older skulls had complete and polished sets of teeth even at an advanced

and stapes, white and perfect. It seems strange that this very delicate little bone, the smallest in the body, could resist decay for one hundred and thirty-six years. The teeth in the upper jaw were all gone, but there was one large empty socket on the left side, from which a tooth probably dropped during disinterment. In the lower jaw were three teeth, one partly and one badly decayed. In the side view of the skull it can be seen that the forehead was not of unusual height, but the great length of the skull is remarkable. A little wisp of white hair is adherent to one side of the vault of the cranium. The sagittal suture and the upper part of the lambdoidal have disappeared except a very few traces, but for half an inch above the nasal bones remains of the suture that unites the two halves of the frontal bone are distinctly visible.

The axis has a peculiarity which may be due to ossification of the soft parts in old age. The articulating surface on the anterior face of the odontoid process is continued for nearly three-eighths of an inch above the rest of the process, forming a convex projection above it, like a shield or battlement. It is high enough to project considerably above the upper surface of the atlas when these bones are articulated, but during life the thickness of the cartilages

covering the joints must have raised the atlas up even with the top of this shield. In the median line of the anterior arch of the atlas are two somewhat similar shields of bone or exostoses, lengthening the articular surface on the inner side of the arch both upward and downward. I saw nothing peculiar in the other vertebræ, but in two lumbar vertebræ of another man seventy-seven years of age, there was a large and broad concave, hook-shaped projection from the side of the body of the lower vertebra, into which was received a convex exostosis from the lower edge of the body of the vertebræ immediately above. This must have completely prevented any motion between



age. One skull had a complete and perfect set except as they had been worn down on their grinding surfaces by many years' use on what was perhaps coarse food.

Another skeleton was that of a minister, eighty years of age, who had been buried for one hundred and thirty-six years, and who is said to have been the principal man in the town during his life. The skull and many of the long bones, especially the femora and humeri and many of the vertebræ were in most excellent preservation. The skull was perfect, even the delicate turbinated bones and thin walls of the orbit being whole. The skull is a remarkable one and is shown from two points of view; the skull of a mound-builder from the West being shown by its side for the sake of the contrast. It will be seen at once that the mound-builder's is an extreme example of the brachycephalic type, and the white man's of the dolichocephalic. The extreme length backwards from the foramen magnum is remarkable, by far the greater part of the occipital bone being nearly horizontal, and taking a sharp turn upward nearly at right angles at the occipital protuberance. The distance from the posterior edge of the foramen to the protuberance is two and a half inches; from the anterior edge to the alveolus of the incisor teeth is three and a half inches, so that the centre of the base of the skull is precisely at the anterior edge of the foramen. The hook at the lower ends of the inner pterygoid plates is very well developed, and the outer plates are very large in size, and at their base are two foramina on each, piercing the external plates from side to side. I have one other skull with the same excessive development of the external plates. The same peculiar formation is spoken of by Dr. Thomas Dwight

in the *JOURNAL* of June 4, 1891, p. 555. The "foramen pterygospinosum" was present in my specimen, and another one nearly, but not quite complete, directly behind it. I found in one ear the malleus, incus

and the two bones. The upper pair of genial tubercles on the lower jaw of the skull, shown in the cut, are grown together into a long, sharply-pointed process which projected directly back into the tissues of the floor of the mouth.



The other skull is considered to be that of a mound-builder. It is almost the exact counterpart of the one figured in Squier and Davis's "Monuments of the Mississippi Valley" or Volume I of "Smithsonian Contributions to Knowledge." In the book the skull figured is said to be the only one known at that time to be a mound-builder's, and to have been exhumed from a mound made by that people. The skull shown in the cut in the *JOURNAL* is very white and quite brittle, the bones having lost nearly or quite all their animal matter. It is evidently of great age. It is owned by a gentleman in this town who has several old Indian skulls, including some found in Connecticut, and who is strongly of the impression that the skull shown here was bought from the collection of one of the writers of "Monuments of the Mississippi Valley," having been found after that book was published.

The bones of the bodies buried more recently, within forty or fifty years, are much better preserved. In many of these all of the bones were found, even the hand and foot bones, which seem to be among the first to disappear. In one case a silk dress was found, quite perfect. In the hair of female skulls the bone combs with which the hair was secured in the knot at the back have lasted very well. In graves fifty years old or thereabouts considerable portions of the coffins are found, but the coffin has always been crushed in by the pressure of the earth, and large portions of them have disappeared. Coffin plates last well and are legible even when many years old. In the graves twenty-five or thirty years old the coffin and its enclosing box are both found, though they are both considerably decayed.
